

REMARKS

Applicants note that in the Office Action Summary, under item 14, box 14a is checked. Applicants are unaware of a translation of a foreign language provisional application. Clarification is respectfully requested.

Claim Disposition

Claims 1 – 20 are pending in the application.

Claim Rejections – 35 U.S.C. § 102(e)

Claims 1 - 20 stand rejected under 35 U.S.C. §102(c) as allegedly being anticipated by Hoshi et al (U.S. Published Patent Application No. US 2001.0004720 A1), referred to herein as Hoshi '720. The Examiner states in the Office Action that:

“As per claims 1, 15, 16, 17, 18, 19, and 20, Hoshi et al. disclose receiving a plurality of signals indicative of the rear steering angle in paragraph 20; checking at least one of said plurality of signals to determine if it falls within a valid range in paragraph 20; correlating at least a first signal of the plurality of signals with at least a second signal of said plurality of signals to determine if either said first signal or said second signal is invalid in paragraph 20; and signaling a rejection of any of said plurality of signals is found to be invalid in paragraph 20.”

“As per claim 2, Hoshi et al. disclose comparing said first signal with an expected value at about an inflection point of said second signal in paragraph 51.”

“As per claim 3, Hoshi et al. disclose adding a second rear-wheel angle offset corresponding to said second signal in response to said comparing in paragraph 10.”

“As per claim 4, Hoshi et al. disclose subtracting a center value from said signal and multiplying a result of said subtracting by a scale factor in paragraph 13.”

“As per claim 5, Hoshi et al. disclose computing said expected value with a reference to a look-up table on paragraph 56.”

“As per claims 6 and 11, Hoshi et al. disclose computing said expected value by evaluating a continuous function in Figure 6A. The expected values are found from previous signals that are stored.”

“As per claim 7, Hoshi et al. disclose calculating a steering angle corresponding to one of said first signal and second signal so as to create a calculated angle in paragraph 52; and computing an expected value of the other of said first signal and said second signal in accordance with said

calculated angle in paragraph 52."

"As per claim 8, Hoshi et al. disclose comparing said expected value of said other of said first signal and said second signal in paragraph 52."

"As per claim 9, Hoshi et al. disclose determining that any of said plurality of signals is invalid if said expected value and said actual value are not substantially equivalent in paragraph 52."

"As per claim 10, Hoshi et al. disclose wherein at least one of said calculating and said computing further comprises using a look-up table in paragraph 56."

"As per claims 12 and 13, Hoshi et al. disclose said plurality of signals comprises a plurality of signal components of a single carrier signal in paragraph 10; providing a single sensor having two signal outputs in paragraph 10."

"As per claim 14, Hoshi et al. disclose comparing at least one of said plurality of signals with an upper limit and a lower limit in paragraph 56."

Applicants respectfully contend that the explanation in the Office Action significantly mischaracterizes the teachings of Hoshi '720.

To anticipate a claim under 35 U.S.C. §102, a single source must contain all of the elements of the claim. Lewmar Marine Inc. v. Barent, Inc., 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988). Moreover, the single source must disclose all of the claimed elements "arranged as in the claim." Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

With regard to Claims 1 and 15 - 20, Applicants respectfully contend that Hoshi '720 does not teach or disclose each element of the invention "arranged as in the claim". Specifically, Hoshi '720 does not teach or disclose, "signaling a rejection if any of said plurality of signals found to be invalid." To support the rejection of this element, the explanation in the Office Action relies on paragraph 20 of Hoshi '720. However, at paragraph 20 there is no disclosure with respect to signaling the rejection. There is only a summary of how the controlling section acts upon the determinations made therein. Therefore, because Hoshi '720 does not disclose or teach an element of the invention it cannot anticipate the Applicants' claims. Thus, Claims 1 and 15 - 20 are allowable, the rejections are improper, and they should be withdrawn.

In view of the above discussion, Claims 2 – 14 depend from Claim 1, whether directly or indirectly, and include all of the corresponding limitations thereof. Claims 1 and 15 – 20 are not taught by Hoshi '720, therefore, Claims 2 – 14 cannot be taught by Hoshi '720 either. Thus, Claims 2 – 14 are allowable, the rejections are improper and they should be withdrawn.

With regard to Claim 2, Applicants respectfully contend that Hoshi '720 does not teach or disclose each element of the invention "arranged as in the claim". Specifically, Hoshi '720 does not teach or disclose, "comparing said first signal with an expected value at about an inflection point of said second signal." To support the rejection of this element, the explanation in the Office Action relies on paragraph 51 of Hoshi '720. However, at paragraph 51 there is no disclosure with respect to an inflection point of the signals. In fact, paragraphs 51 – 55 and Figure 6 specifically teach that the measurements are not made "at or about an inflection point". For example, Figure 6 specifically depicts that the comparison of the signals discussed therein is made at the particular voltages of 3.0 and 4.0 volts. Moreover, these voltage points rely on the linearity of the signals not an inflection point of the signals. Therefore, because Hoshi '720 does not disclose or teach an element of the invention it cannot anticipate the Applicants' claims. Thus, Claim 2 is allowable, the rejections are improper, and they should be withdrawn.

In view of the above discussion, Claims 3 – 6 depend from Claim 2, whether directly or indirectly, and include all of the corresponding limitations thereof. Claim 2 is not taught by Hoshi '720, therefore, Claims 3 – 6 cannot be taught by Hoshi '720 either. Thus, Claims 3 – 6 are allowable, the rejections are improper and they should be withdrawn.

With regard to Claim 7, Applicants respectfully contend that Hoshi '720 does not teach or disclose each element of the invention "arranged as in the claim". Specifically, Hoshi '720 does not teach or disclose, "calculating a steering angle corresponding to one of said first signal and said second signal so as to create a calculated angle." To support the rejection of this element, the explanation in the Office Action relies on paragraph 52 of Hoshi '720. However, at paragraph 52 there is no disclosure with respect to calculating a steering angle corresponding to one of said first signal and said second signal. In fact, paragraph 52 merely discloses that the angle identified as A "represents the angle of rotation of the steering wheel representing one determination timing point when determining the amplitudes of the ... signals a and b". Moreover, Hoshi '720 does not teach or disclose, "computing an expected value of the other of said first signal and said second signal in accordance with said calculated angle." Hoshi '720 does not teach or disclose anything with respect to using one

signal to make one determination e.g., calculated angle" and using the other signal for another, e.g., "expected value". In fact, paragraph 55 specifically teaches how the signals are utilized for the comparison in Hoshi '720. Therefore, because Hoshi '720 does not disclose or teach an element of the invention it cannot anticipate the Applicants' claims. Thus, Claim 7 is allowable, the rejections are improper, and they should be withdrawn.

In view of the above discussion, Claims 8 -- 11 depend from Claim 7, whether directly or indirectly, and include all of the corresponding limitations thereof. Claim 7 is not taught by Hoshi '720, therefore, Claims 8 -- 11 cannot be taught by Hoshi '720 either. Thus, Claims 8 -- 11 are allowable, the rejections are improper and they should be withdrawn.

With regard to Claim 12, Applicants respectfully contend that Hoshi '720 does not teach or disclose each element of the invention "arranged as in the claim". Specifically, Hoshi '720 does not teach or disclose, "said plurality of signals comprises a plurality of signal components of a single carrier signal." To support the rejection of this element, the explanation in the Office Action relies on paragraph 10 of Hoshi '720. However, at paragraph 10 there is no disclosure with respect to a single carrier signal, or any carrier signal for that matter. In fact, paragraph 10 merely teaches that the two detection signals are two sinusoids of the same period shifted in phase, there is no teaching with respect to a carrier signal. Therefore, because Hoshi '720 does not disclose or teach an element of the invention it cannot anticipate the Applicants' claims. Thus, Claim 12 is allowable, the rejections are improper, and they should be withdrawn.

The arguments presented herein are made for the purposes of better defining the invention, rather than to overcome the rejections for patentability. The claims were not amended to overcome the prior art and therefore, no presumption should attach that either the claims have been narrowed over those earlier presented, or that subject matter or equivalents thereof to which the Applicants are entitled has been surrendered. Allowance of the claims is respectfully requested in view of the amendments and following remarks. Moreover, no amendments as presented alter the scope of the claimed invention and therefore cannot necessitate a new grounds rejection. It is believed that the foregoing remarks are fully responsive to the Office Action and that the claims herein should be allowable to the Applicants. Accordingly, reconsideration and withdrawal of the rejections are requested.

In the event the Examiner has any queries regarding the instantly submitted response, the undersigned respectfully requests the courtesy of a telephone conference to discuss any matters in need of attention.

If there are additional charges with respect to this matter or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully Submitted,

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